

ENVIRONMENTAL RISKS

Short-term health risks

- Water containing raw sewage
- Runoff containing fecal pathogens
- Food contaminated with fecal pathogens

Long-term health risks

- Air pollution, particularly in urban and industrial areas
- Chemical contamination of food or water

HAZARDOUS ANIMALS AND PLANTS

Venomous Snakes – Adders, vipers, cobras, and black snakes present countrywide; some have lethal venom. If bitten, seek urgent medical attention!

Prevention – Do not handle *any* snake; avoid walking barefoot.

Scorpions and Spiders – Scorpions are numerous country-wide; some have potentially lethal venom; spider bites can be very painful. Seek medical attention if bitten/stung.

Prevention – Shake out boots/bedding/clothing prior to use; never walk barefoot; avoid sleeping on the ground; use caution when entering bunkers or abandoned buildings.

Centipedes, Millipedes, Solifugids, Blister/ Bombadier/ Rove Beetles, Ants – These can inflict painful bites, stings, or secrete fluids that can blister skin. Seek medical attention if bitten or stung.

Prevention – Shake out boots/bedding/clothing prior to use; never walk barefoot; avoid sleeping on the ground.

Marine Animals – Venomous sea snakes, rays, fish, starfish, shellfish, jellyfish, anemones, sea nettles/urchins, corals, and large sharks in coastal waters. Seek medical attention if stung/bitten.

Prevention – Swim at approved beaches; do not handle.

Hazardous Plants – Plants with thorns that can puncture skin or with leaves/stems that produce rashes are present countrywide; burning some plants can cause skin rashes and lung damage; some plants cause poisoning if chewed/eaten. Seek medical attention if injured or poisoned from plants.

Hazardous Animals and Plants (Continued)

Prevention – Do not touch, chew, eat, or burn unfamiliar plants; use clothing as a protective barrier for skin; wash contaminated skin/clothing after contact.

HIGH ELEVATIONS

Operations at 6,000 feet can impact unit and individual effectiveness.

Signs of altitude sickness: headache, nausea, vomiting, dizziness, fatigue, irritability, coughing

Acclimatization:

- Staged Ascent – Ascend to moderate altitude (5,000–8,000 feet) and remain there for 3 days before ascending higher.
- Graded Ascent – Limit daily altitude to allow partial acclimatization. Spend 2 nights at 9,000 feet and limit to no more than 1,000 feet per day above each night's sleep.

Treatment – The preferred method to treat any high altitude illness is to evacuate the individual to a lower altitude. See GTA 08-05-060, [A Soldier's Guide to Staying Healthy at High Elevations](#).

DISTRIBUTION UNLIMITED

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DEPLOYMENT HEALTH GUIDE: SAUDI ARABIA



This country-specific guide should be used in conjunction with [GTA 08-05-062, Guide to Staying Healthy](#), and is intended to provide information that can help reduce your risk of Disease and Non-battle Injuries (DNBI) when deployed. This health threat and countermeasure information is based on the most current data available from U.S. Department of Defense medical agencies at the time of production. In addition to the information in this guide, you should also receive force health protection, health threat, and preventive medicine countermeasures training/briefings prior to and, as required, throughout the length of your deployment.



Deployment Health Guide Series

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SAUDI ARABIA OVERVIEW

Location – Saudi Arabia is located in the Middle East, bordering the Persian Gulf and the Red Sea, north of Yemen. Land mass is slightly less than one-fourth of the United States.

Climate – Very hot, arid desert with great temperature extremes. The average temperature is 91–115° F from May to September. The mean daily minimum temperatures vary from 36–68° F from November to March.

Rainfall – Average rainfall is 1–6 inches, except in southwestern Saudi Arabia where average annual rainfall is 20 inches.

Terrain – Saudi Arabia is mostly uninhabited, sandy desert. The world's largest desert covers the southern one-fourth of Saudi Arabia (402,400 square miles). The narrow coastal region along the Red Sea rises to form the rugged western mountains with the highest peaks at approximately 8,900 to 10,300 feet.

Forces of Nature – Sand, dust storms and flash floods in the southwestern mountains

RISK ASSESSMENT

Saudi Arabia is at **INTERMEDIATE RISK*** for infectious diseases. Without force health protection measures, mission effectiveness will be adversely impacted.

*Based on a combination of all major infectious diseases that occur in a country, the Armed Forces Medical Intelligence Center (AFMIC) assigns an **overall country risk level** of low, intermediate, high, or very high risk, as compared to other countries.

INFECTIOUS DISEASES

Food-borne and Water-borne Diseases

Consuming contaminated food, water, or ice

Diarrhea, bacterial – Possible attack rate of 11–50 percent per month if local food, water, or ice is consumed.

- Threat – countrywide, year round
- Symptoms – loose, watery or explosive bowel movements
- Recovery 1–3 days with antibiotics

Hepatitis A – Less than 1 percent per month attack rate among unvaccinated personnel consuming local food, water, or ice

Food-borne and Water-borne Diseases (Continued)

- Threat year-round; countrywide
- Symptoms – none to flu-like illness
- Severe, 1–4 weeks recovery, sometimes initially requiring hospitalization

Prevention – Consume only U.S. military-approved food, water, and ice; take **hepatitis A vaccine** if directed by medical authority

Vector-borne Diseases

Rift Valley fever – Sporadic cases, with epidemic potential involving a significant number

- Threat - year round; greatest after heavy rainfall; primarily rural areas of southwestern region
- Symptoms – mild to severe; fever, back pain, extreme weight loss, eye or brain inflammation, hemorrhaging, shock, coma, death
- Transmission – day- and night-biting mosquitoes
- Hospitalization 1-7 days; can be fatal

Others: Rare, small, or unknown numbers of cases possible; some may have very severe outcomes: **Boutonneuse fever** (tick-borne); **Crimean-Congo hemorrhagic fever** (tick-borne); **dengue fever** (mosquito-borne); **leishmaniasis** (visceral and cutaneous; sand fly-borne); **malaria** (mosquito-borne); **sandfly fever** (sand fly-borne); **Sindbis (Ockelbo) virus** (mosquito-borne); **West Nile fever** (mosquito-borne).

Prevention – **DEET** on exposed skin; **permethrin-treated uniforms**; **permethrin-treated bed nets**; malaria prevention pills if prescribed (critical)

Animal Contact Diseases

Rabies – Exposure to virus-laden saliva of an infected animal through a bite, scratch or breathing airborne droplets; risk is comparable to the United States.

- Threat year-round, countrywide; greater in rural areas
- Initial symptoms – pain, tingling, or itching from bite site, chills, fever, muscle aches
- Death likely in the absence of post-exposure prophylaxis

Prevention – Avoid all animals; if scratched or bitten, seek medical attention immediately; pre- and/or post-

Animal Contact Diseases (Continued)

exposure vaccinations if prescribed by medical authority.

Others: **Q fever**

Respiratory Diseases

Tuberculosis – Breathing contaminated air droplets from other people (coughing/sneezing)

- Highest threat from prolonged close contact with local populations
- Threat year-round; countrywide
- Symptoms – none to cough, chest pain, breathlessness, night sweats
- Severe illness or death if not treated

Prevention – Avoid close contact with local populations; early detection/treatment reduces severity.

Others: **Meningococcal meningitis**

Sexually Transmitted Diseases

Gonorrhea/Chlamydia – Unprotected sexual contact with infected person; high number of cases possible

- Threat year-round; countrywide
- Symptoms (in men) – none to burning sensation when urinating or discharge
- Symptoms (in women) – none to burning when urinating to increased vaginal discharge
- Mild; outpatient treatment

Others: **HIV/AIDS**

Prevention – Abstinence; latex condoms; not sharing needles

Water Contact Diseases

Leptospirosis – Wading, swimming, other contact with water/mud contaminated with infected animal urine; 1–10 percent potential attack rate possible under worst-case conditions

- Threat year-round
- Symptoms – fever, chills, nausea
- Hospitalization of 1-7 days

Prevention: Do not swim/wade in unapproved water; wash skin and clothing after exposure to freshwater streams/ponds.

Others: **Schistosomiasis**